

**WHAT IS CLAIMED IS:**

1. A method for determining, in a base station controller (BSC), information for controlling transmission power of a mobile station, said information depending on a signal received from a base station transceiver system (BTS), in a mobile communication system, said mobile communication system including said mobile station for transmitting and receiving data in a predetermined period, said base station transceiver system and said base station controller for controlling said base station transceiver system, the method comprising the steps of:

10 receiving, in the base station controller, a reverse message from the base station transceiver system; and  
determining a type of a frame included in the received reverse message.

2. The method as claimed in claim 1, further comprising the step of:  
15 setting previous power control information to present power control information if the frame type of the reverse message is a null frame indicating there is no data to transmit;

20 wherein power control information is for controlling transmission power of the mobile station, and said previous power control information was used prior to receipt of said null frame.

3. The method as claimed in claim 1, further comprising the step of:  
setting present power control information to increase transmission power of the mobile station, if the frame type of the reverse message is an erasure frame.

4. The method as claimed in claim 1, further comprising the step of:  
setting power control information initially defined during resource assignment to  
present power control information, if the frame type of the reverse message is an idle  
frame.

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5. A method for determining, in a base station transceiver system (BTS),  
information for controlling mobile station transmission power depending on a signal  
received from a base station controller (BSC), in a mobile communication system, said  
mobile communication system including said mobile station for transmitting and  
10 receiving data in a predetermined period, said base station transceiver system and said  
base station controller for controlling said base station transceiver system, the method  
comprising the steps of:

receiving, in the base station transceiver system, a forward message from the  
base station controller; and

15 analyzing a type of a frame included in the received forward message.

6. The method as claimed in claim 5, further comprising the step of:  
setting previous power control information used for power control of the mobile  
station prior to receipt of a null frame as present power control information for  
20 controlling transmission power of the mobile station, if the frame type of the forward  
message is a null frame indicating that there is no data to transmit.

7. The method as claimed in claim 5, further comprising the step of:  
setting power control information included in the forward message as the present  
25 power control information, if the frame type of the forward message is an idle frame

8. The method as claimed in claim 5, further comprising the step of:  
setting present power control information to increase transmission power of the  
mobile station, if the type of frame of the forward message is an erasure frame.

5 9. A method for determining, in a base station controller (BSC),  
information for controlling transmission power of a mobile station, said information  
depending on a signal received from a base station transceiver system (BTS), in a mobile  
communication system, said mobile communication system including said mobile station  
for transmitting and receiving data in a predetermined period, said base station  
10 transceiver system and said base station controller for controlling said base station  
transceiver system, the method comprising the steps of:

receiving, in the base station controller, a reverse message from the base station  
transceiver system;

15 determining a type of a frame included in the received reverse message; and  
determining present power control information to control power of the mobile station  
depending on said type of data.

20 10. A method for transmitting a signal from a base station transceiver  
system (BTS) to a base station controller (BSC) when there is no data transmitted  
from a mobile station while in discontinuous transmission (DTX) mode, in a mobile  
communication system, the method comprising the steps of:

detecting the discontinuous transmission (DTX) mode if there is no reverse  
traffic;

setting a reverse traffic channel quality field to zero; and

transmitting the information of the reverse link quality field to the base station controller.

5        11. A method for transmitting a signal from a base station transceiver system (BTS) to a base station controller (BSC) when there is no data transmitted from a mobile station while in discontinuous transmission (DTX) mode in a mobile communication system, the method comprising the steps of:

detecting the discontinuous transmission (DTX) mode if there is no reverse traffic;

10        setting a previous power control information at the time point where the DTX mode is detected, to a present power control information at the time point where the DTX mode is detected, to a present power control information if a DCCH forward message last received form the base station controller is not a null frame; and

15        transmitting the present power control information to base station controller.

20        12. A method for determining, in a base station controller (BSC), information for controlling transmission power of a mobile station, said information depending on a signal received from a base station transceiver system (BTS), in a mobile communication system, the method comprising the steps of:

receiving, in the base station controller, a reverse message including a reverse traffic channel quality field from the base station transceiver system;

determining whether the information of the reverse traffic channel quality field in the reverse message is zero; and

setting previous power control information to present power control information if the information of the reverse traffic channel quality field is zero.